

**OPERATOR'S GUIDE  
TO  
NONMETALLIC MINING**

This manual was prepared for use by sand, gravel, and rock excavators and private consultants applying for permits under Chapter 30--Wisconsin Statutes and NR 340--Wisconsin Administrative Code.

It provides answers to generic questions relevant to the initial application process.

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**NOTE:** Review and processing of completed Chapter 30 applications for nonmetallic mining permits takes time. DNR staff reviews application forms and supplements, conducts field investigations, and completes environmental assessments. This process may take six months or longer. Incomplete applications slow the process considerably.

Please provide all information outlined in this manual. Do not indicate N/A when answering any question unless that option is offered. All requested information is needed for a complete application package.

The best time of year to submit a completed application and drawings with all the required information is around September 1. This allows the DNR to conduct a field inspection and review the project site before freeze-up or snowfall. Paperwork and writing of the required environmental assessment can then be completed during the winter months so a decision can be made before the following spring.

## SECTION I

### Questions and Answers About Application Permits

1. I want to: Excavate nonmetallic minerals (sand, gravel, clay, peat, rock, asbestos, beryl, feldspar, talc, topsoil etc.) from a site. In generic, what regulations may cover my proposed excavation?

ANSWER: Chapter 30 of the Wisconsin Statutes, NR 340, Wisconsin Administrative Codes, and county permits may be required for excavations in upland areas. Permits are required in all shoreland, floodplain, and wetland zones. Contact your area DNR Water Management Specialist and county or city zoning office. Zoning staff administer floodplain, shoreland, and wetland regulations.

2. I want to: Excavate material and create a pond. In generic, what regulations may cover my proposed excavation?

ANSWER: A permit under Chapter 30 is required for ponds within 500 feet of navigable water, or if a pond ultimately connects to navigable water, or is connected via a channel to navigable water or is located on any definable stream channel (See Figures 1 and 2).

Note: Contact your local zoning administrator to see if a county zoning permit is required.

3. I want to: Excavate material from a floodplain or high bank adjacent to a stream or lake. In generic, what regulations may cover my proposed excavation?

ANSWER: A permit under Chapter 30 is required for excavations disturbing an area in excess of 10,000 square feet on the bank.

Note: Contact your local zoning administrator to see if a county zoning permit is required.

4. I want to: Dredge material from a creek, stream, river, slough or lake bed. In generic, what regulations may cover my proposed excavation?

ANSWER: A permit under Chapter 30 is required for excavation of material from any stream, creek, or river regardless if the stream or creek is navigable or nonnavigable. A Chapter 30 permit is also required for excavation of material from a navigable slough. A contract is required for excavation of material from a lake bed.

5. I want to: Excavate material while enlarging a creek, stream, river, slough or lake. In generic, what regulations may cover my proposed excavation?

ANSWER: A permit under Chapter 30 is required for enlargement of any navigable waterways.

Note: Contact your local zoning administrator to see if a local county zoning permit is required.

6. I want to: Grade and excavate material (sand/gravel bar) from a creek, stream or river channel. In generic, what regulations may cover my proposed excavation?

ANSWER: A dredging permit is required for removal of material from any water body.

Note: If the excavation (sand/gravel bar) is above the Ordinary High-water Mark and does not disturb an area in excess of 10,000 square feet, no permit under Chapter 30 is required.

Note: Contact your local zoning administrator to see if a local county zoning permit is required.

7. I want to: Excavate material and relocate a stream, creek or river channel. In generic, what regulations may cover my proposed excavation?

ANSWER: A permit is required for relocating a navigable stream, creek, or river.

Note: Contact your local zoning administrator to see if a local county zoning permit is required.

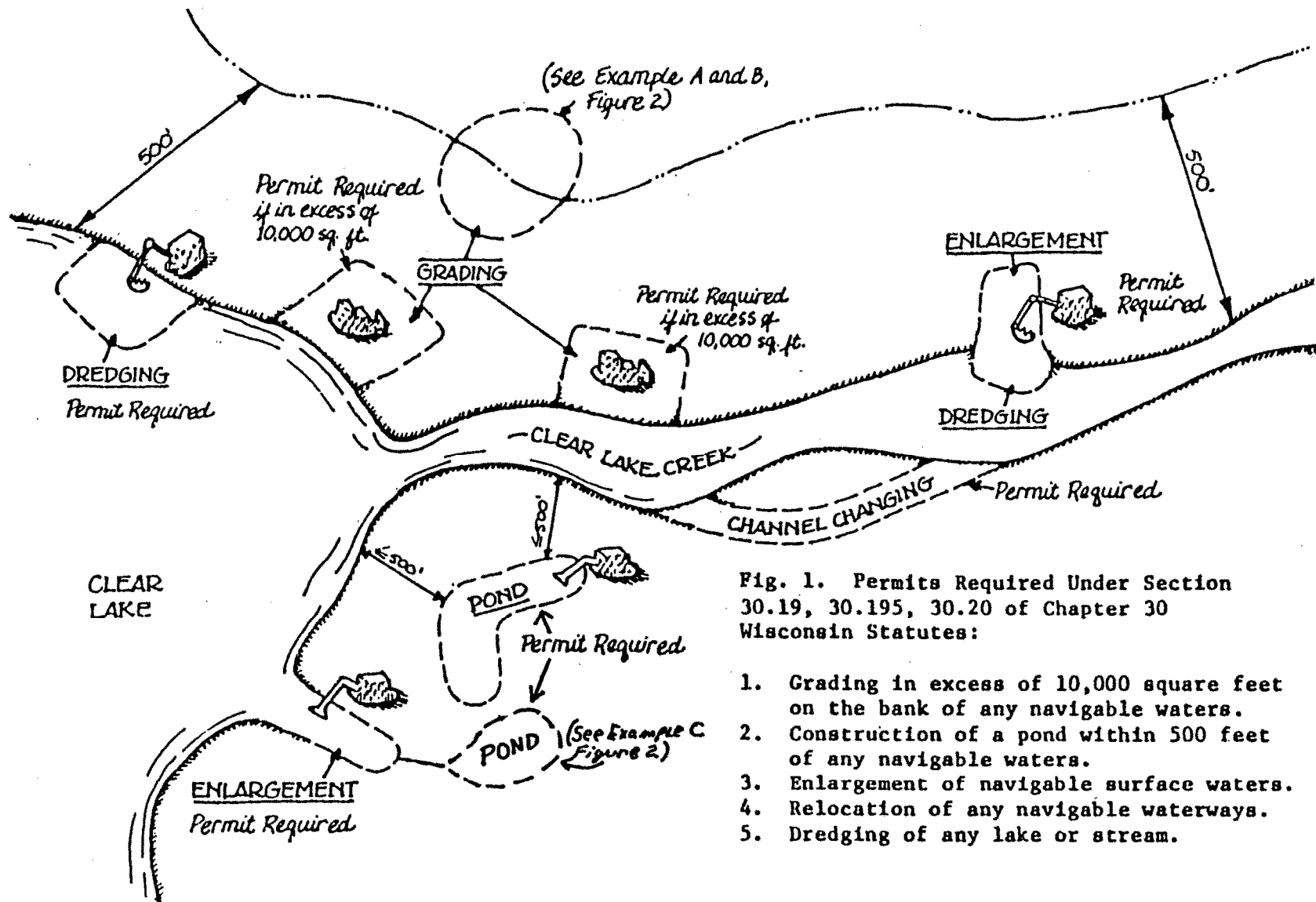
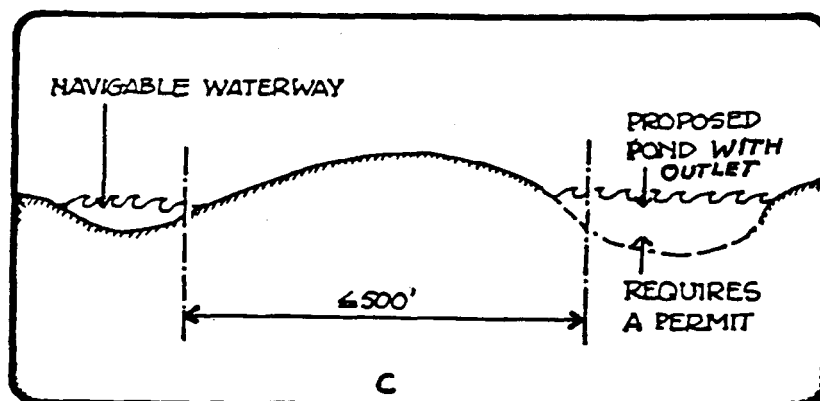
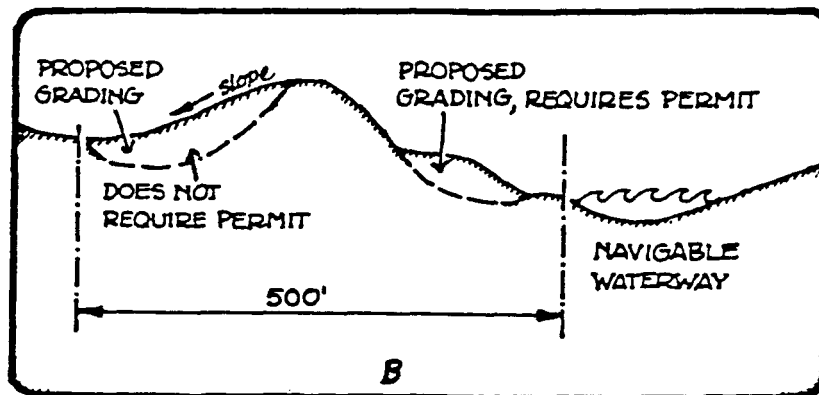
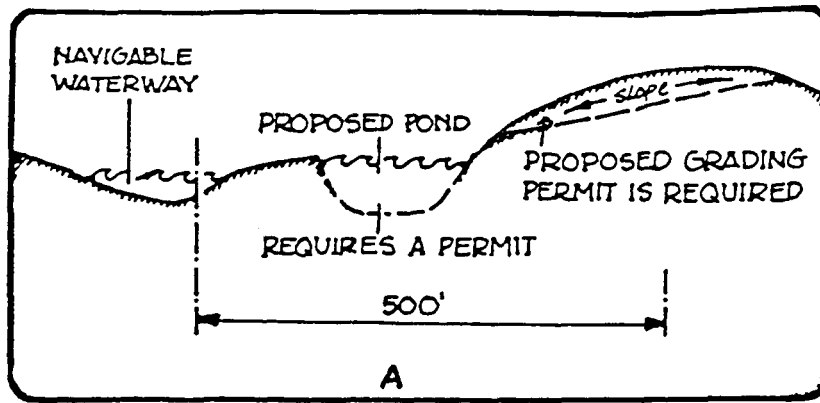


Fig. 1. Permits Required Under Section 30.19, 30.195, 30.20 of Chapter 30 Wisconsin Statutes:

1. Grading in excess of 10,000 square feet on the bank of any navigable waters.
2. Construction of a pond within 500 feet of any navigable waters.
3. Enlargement of navigable surface waters.
4. Relocation of any navigable waterways.
5. Dredging of any lake or stream.

Illustrates the areas where Chapter 30 of the Wisconsin Statutes applies to the excavation of material (sand, gravel, etc.).



Illustrates the areas where Chapter 30 of the Wisconsin Statutes applies to the excavation of material (sand, gravel, etc.). It also illustrates a side view of excavation and when Chapter 30 permits are required.

## SECTION II

### Chapter 30 and NR 340 Application Requirements

The following information applies to nonmetallic mining and reclamation associated with navigable waterways or adjacent areas that require either a permit or contract under Sections 30.19, 30.195, or 30.20, Wisconsin Statutes.

A permit may only be granted if an activity will not injure or be detrimental to public rights or interest in the waterway involved. Without adequate controls, excavation, dredging or grading in or near navigable waterways can cause serious degradation of water quality, fish and wildlife habitat, and public interest in recreation and scenic beauty.

It is the purpose of NR 340 to avoid unnecessary adverse effects and minimize the unavoidable adverse effects caused during and after such activities, to provide for the expeditious rehabilitation of affected land, and to restrict excavation, dredging and grading where the adverse effects cannot be minimized or avoided.

Natural Resources Board policy recognizes:

1. Streams are sensitive to the large-scale removal of native material from the streambed and immediate banks.
2. The potential consequences of this removal can be significant where the equilibrium of the stream is altered. Compensating aggradation or degradation of the channel can occur downstream from the project location, or where the stability of the streambank is reduced and erosion, slope failure and siltation result.
3. Aquatic resources can be significantly harmed by erosion, deposition, aggradation or degradation. The Board also recognizes the difficulty in predicting when or where such effects will occur and, especially, the difficulty of minimizing those effects once they have been detected.

Natural Resources Board policy requires:

"... nonmetallic mineral excavation in the channel and immediate banks of streams be carefully regulated in order to avoid or minimize adverse effects on aquatic resources. Therefore, the Department shall, in its review of permit applications under this chapter, presume that excavation in the channel and immediate banks should be avoided where reasonable alternatives are available. The Department shall require applicants to convincingly demonstrate a need for excavation of the channel or immediate banks by demonstrating after investigation that reasonable alternatives are not available. The Department will only concur in such excavation when the applicant has demonstrated by a preponderance of evidence that the excavation is technically, economically and environmentally feasible and meets other applicable requirements of law ... *no* operation may be authorized in navigable waterways designated in s. NR 102.10 as outstanding resource waters which will result in a lowering of water quality or impair any use of the navigable waterway in any way."

## Chapter 30 Permit Applications

Operators must use Application Form 3500-53 and the *Nonmetallic Mining Permit Application Supplement*. These forms are available from any DNR office.

The application package must also include all of the following.

1. Information about the existing natural (vegetative cover) and physical conditions of the site including 1.) a detailed narrative; 2.) wetland and floodplain maps with project boundaries clearly identified; and 3.) drawings and cross sections of the project site.

Information shown on drawings must be referenced to clearly identified, recoverable bench marks, described and located on the plans. Drawings and maps which are color coded reproduce poorly and are not acceptable. Use symbols and a black ink pen or black felt tip pen that does not bleed through the paper. If drawings or maps are larger than 8½" by 11", six sets must be submitted.

The following points must be addressed:

- a. Soil and geologic composition of the project site (borings should be required during the early preplanning stages to identify the type of material and size of the deposit);
- b. Locations, dimensions and elevations of surface waters;
- c. The elevation of ground water throughout the project site;
- d. Cross sections of the entire floodplain of any streams. A hydrologic and hydraulic analysis may also be required to demonstrate compliance with NR 116. Net changes in ground contours in the floodway of a stream that may cause an increase in the 100 year flood elevation, including temporary stockpiling, require that the operator submit a hydraulic analysis if the operation exceeds five acres or has an estimated cost exceeding \$125,000. Such changes may also require other action such as amending a flood profile or securing flooding easements to comply with ch. NR 116 or a local floodplain zoning ordinance;
- e. Location and description of manmade features on the site;
- f. Detailed plans and narrative descriptions of the nature and extent (dimensions) of any existing excavations, and the dimensions and quantities of stockpiled materials, topsoil and refuse on the site. The location of both temporary and permanent haulageways (roads) should be shown; including their length, width, side slopes, and elevations;
- g. Historical and archaeological features, if known;
- h. Existing drainage patterns; and
- i. Existing topography. Plans of the site should have a contour interval of 2 feet or less if ground elevations will change and 5 feet or less if ground elevations will not change. A wider contour interval may be approved in areas of steep topography;



2. A legal description of all land within the project boundary that the applicant owns, leases or has an option to purchase or lease. Copies of deeds, options to purchase, and lease agreements must be submitted with the application.
3. Evidence that the applicant has applied for or obtained all necessary local, state, and federal permits and licenses.
4. A statement explaining what the excavated material will be used for (e.g. road construction, asphalt, ready mix, cement blocks, cement pipe, etc.).
5. A description of any investigation conducted to identify alternative upland sites, efforts made to obtain the material, and the estimated volume and quantity of material to be extracted, accompanied by adequate documentation for the basis of the estimates.
6. For connected enlargements and grading projects, applications must include the name and address of the secretary of any property owners' association pertaining to the bodies of water affected or, if there is no such association, at least 5 persons who own real property located adjacent to the bodies of water. If fewer than 5 persons own real property adjacent to the bodies of water, the names and addresses of such persons that own real estate so located shall be given.
7. The complete Operation and Reclamation Plan described below.
8. Other information as required by the Department of Natural Resources in order to make a decision.

### **Operation and Reclamation Plan**

As part of the application package, the operator must provide a detailed schedule and plan describing areas of excavation to be completed each year and work to be performed for each sequential stage of staged operations over the life of the permit.

Include narrative and drawings to clearly describe all of the following.

1. The location, extent (dimensions), depth and manner of operation anticipated. If your project is a staged operation, describe for each stage.
2. The proposed means of loading and transporting material.
3. The estimated volume in cubic yards of material to be extracted and/or stockpiled. Document the basis for the estimates.
4. The final configuration of the nonmetallic mining site including the depths of the excavation; and the location, extent (size) and types of stockpiled materials.
5. Plans to dispose of refuse created on the site throughout the life of the project.

6. The location, removal (time frame), stockpiling (cubic yards) and protection (erosion control) of all materials in conformance with the local floodplain zoning ordinance and NR 116.
7. Measures to screen the operation from view considering the generic shoreland zoning requirements of NR 115.05(3)(c) and the need for buffer zones of sufficient width to prevent environmental pollution.
8. Grading, and stabilization of the site.
9. Measures for diversion and drainage of both ground and surface water from the site where necessary to protect these waters from pollution (include details about erosion control measures such as sediment basins, wash water ponds, sediment screens, silt fences, straw or rock check dams, grass waterways, etc.).
10. Stabilization of the project site, including plans for topsoil grading and application. Include measures to be employed for erosion, drainage control and revegetation. Plans must outline both temporary and final stabilization measures. A diverse, self-regenerative species mixture should be used where consistent with final reclamation. A list of the species for both seed mixtures and woody vegetation to be planted should be provided. Sources of information on stabilization, erosion control and seed mixtures include:
  - a. The Department of Natural Resource publication entitled *Wisconsin Construction Site Best Management Practice Handbook*, with listings for slope and soil type;
  - b. The WI Department of Transportation *Standard Specifications for Road and Bridge Construction*, with minimum seeding requirements for disturbed earth and right-of-ways;
  - c. Soil Conservation Service *Critical Area Planting Guidelines*, with listings for slope and soil types.

The operator may submit alternate seeding mixtures and stabilization techniques designed to achieve stabilization of the site if it can be shown that the methods of the agencies listed above are not appropriate for all conditions encountered.

Revegetation is not necessarily limited to planting of a grass cover; the Department may require woody vegetation (trees and shrubs) in the reclamation plan to offset habitat losses.

11. Floodplain excavation where fish entrapment would occur should include a design for an impoundment of water (ponds) of sufficient quality, permanency, size, and stable slopes or banks to benefit public use and avoid fish kills.
12. A marked, easily usable public access from the waterway is required for ponds constructed in the floodplain because of fish entrapment. Documentation of a legal, recordable, dedicated access must be submitted with the application.

13. An acknowledgement of continued responsibility for restoration and revegetation of the project site until stabilization has been determined to be adequate by the Department. (This acknowledgement is found within the *Nonmetallic Mining Permit Application Supplement*).
14. Estimated cost for progressive, temporary, and final reclamation of the entire nonmetallic mining site.
15. An estimate of total reclamation costs. Use the Reclamation Costs Estimate form which is part of the *Nonmetallic Mining Permit Application Supplement* or provide complete information on a separate sheet. This information is needed for an environmental analysis and to determine whether the operator must submit a hydraulic analysis as specified in NR 116. These costs will be only a portion of the total project costs.
16. Other information as needed by the Department in order to make a decision.

NOTE: Unless reflected in the schedule, cessation of project operations for more than 180 consecutive days is an abandonment of operations [see NR 340.02(1)].

### **Bonding**

Bonding is required for each site over one acre and multiple sites of less than one acre by the same operator. Governmental units are not required to obtain bonds.

1. Determination and Notification - The bonding level for reclamation or progressive reclamation in staged operations must be the larger amount of either \$2,000 per acre or \$0.25 per cubic yard of material excavated *based on 1989 dollars* unless the operator justifies a lesser amount to the Department's satisfaction.

The base of 1989 dollars requires that the bonding level must be adjusted to reflect inflation or the cost of living increases. For 1992, the inflation of 4.6 % for 1989, 6.1% for 1990 and 3.1% for 1991, or a total of 14% ( $1.046 \times 1.061 \times 1.031 = 1.144$ ) must be added to the listed rates resulting in amounts of \$ 2280 per acre or \$ 0.285 per cubic yard. For permits issued after 1992, remember to correct for cost of living adjustments for all years back to 1989.

The Department of Natural Resources must determine the required bonding level for all operations and notify the operator. Following approval of the permit, and as a condition of the permit, the operator must file a bond with the Department. The bond amount shall be sufficient to cover the cost to the State of hiring a contractor to complete reclamation or progressive reclamation in staged operations.

2. Filing - Upon notification of required bonding levels by the Department, but prior to commencing the project, the operator shall file with the Department a bond conditioned on faithful performance of all requirements of Ch. 30, all provisions of NR 340 and all provisions of the permit. The operator may start operation and reclamation activities only after notification by Department staff that the bond submitted meets NR 340 requirements.
3. Requirements - Bonds must be issued by a surety company licensed to do business in this state. At the option of the operator, a performance bond or a forfeiture bond may be filed.

Surety companies may complete the reclamation plan in lieu of cash payment to the Department.

The bond must provide that it is not cancelable by the surety, except after not less than 90 days notice to the Department in writing by registered or certified mail. The bond must be payable to the "State of Wisconsin, Department of Natural Resources". Not less than 30 days prior to the expiration of the 90-day notice of cancellation, the operator must deliver to the Department a replacement bond. If no replacement bond is provided the existing bond must remain in effect.

Bonds should be issued on a non-cancelable form. A bond may not be cancelled until a replacement bond has been approved or the project has been closed out after a final inspection. Bonds must be kept current.

4. Bond Alternatives - Upon written approval of the Department, an operator may deposit cash, certificates of deposit or government securities with the Department in lieu of a bond. Interest received on certificates of deposit or government securities will be paid to the operator. Certificates of deposit must be automatically renewable or other assurances shall be provided before the maturity date. Any securities must be made payable to the "State of Wisconsin, Department of Natural Resources."
5. Bond Reevaluation - The Department may reevaluate and adjust the amount of the progressive reclamation bond or security deposit required for reclamation. Reclaimed areas may be released from the bond coverage. Reevaluation will be made pursuant to NR 340.055(1) and (2).
6. Multiple Project Permit Bonding - Any operator who obtains a permit from the Department for two or more sites may elect, at the time a second site is approved, to post a single bond in lieu of separate bonds on each site. Any single bond so posted must be in an amount equal to the estimated cost to the State for reclamation as stated in each permit. When an operator elects to post a single bond in lieu of separate bonds previously posted on individual sites, a separate bond may not be released until the new bond has been accepted by the department.
7. Bond Release - The Department will release the operator's bond after inspection of the project site shows completed reclamation of the project site in accordance with the operation and reclamation plans. The entire project site must be adequately revegetated and stable before the bond can be released. Final inspection must be made not less than one year, nor more than two years after the completion of the project, including reclamation.
8. Abandoned Sites - Bonds for any site abandoned at the time a permit expires will not be released unless it is shown that no operations have occurred at that site and no potential for environmental pollution exists as a result of an operator's actions or inactions.

### **Permit Modifications**

1. At any time prior to expiration of a permit, an operator may apply for an amendment or cancellation of a project permit or for a change in the reclamation plan for a site.

The application for the amendment, cancellation or change should be submitted by the operator on a form provided by the Department. The application should identify any tract of land to be added to or removed from the permitted site, or to be affected by a change in the operation and reclamation plan. Any increase in the size of the site shall be subject to the notice and potential hearing requirement of s. 30.02.

2. When one operator succeeds to the interests of another in any uncompleted operation, the Department will release the first operator from the responsibilities imposed by chapter 30 only if:
  - a) both operators are in compliance with the requirements and standards of the chapter and NR 340;
  - b) the new operator assumes the responsibility of the former operator to complete the reclamation; and
  - c) the new operator submits an adequate bond.

### **Permit Renewals and Extensions**

The initial Chapter 30 permit can be issued for a period not greater than 10 years. If no proceeding for revocation or violation of the permit has been initiated during the term of the permit and there are no other changes or previously unknown circumstances, including environmental consideration, the permit may be either renewed or extended if the following considerations are met:

1. A request for a permit renewal or extension must be submitted to the Department in writing prior to the expiration date of the existing permit. Be sure to specify whether you are requesting a 3-year extension or 10-year renewal.
2. No permit renewal or extension may be granted unless the operation is in compliance with the terms of the existing permit.
3. Permit extensions may be granted for up to three years. A permit extension may only be granted one time and only toward the end of a project when permit renewals are no longer needed.
4. Permits may, after a notice and opportunity for hearing, be renewed for succeeding periods of up to 10 years.
5. Permit renewals and extensions may be conditioned upon correction of any unanticipated environmental damage occurring during the original permit.

### **Inspections and Documentation**

Department of Natural Resources staff is required to inspect each nonmetallic mining site at least once annually to ensure that the operation is in conformance with the permit and the operation and reclamation plan. DNR staff writes reports based on these site inspections.

Operators may be required to submit an annual narrative describing the progress of the operation and reclamation.

### **Violations**

An operator found either conducting project operations without the required permits or violating the conditions of a permit will be ordered to cease all operations immediately and submit a reclamation plan for the land already affected. Continued operation and after-the-fact permit approval is prohibited until the reclamation plan has been approved by the Department and necessary progressive reclamation has been completed. Bonds may be called to secure necessary reclamation.

The Department may cancel and rescind the permit of any operator who is in violation of NR 340 and the permit.

## SECTION III

### Sample Drawings and Illustrations

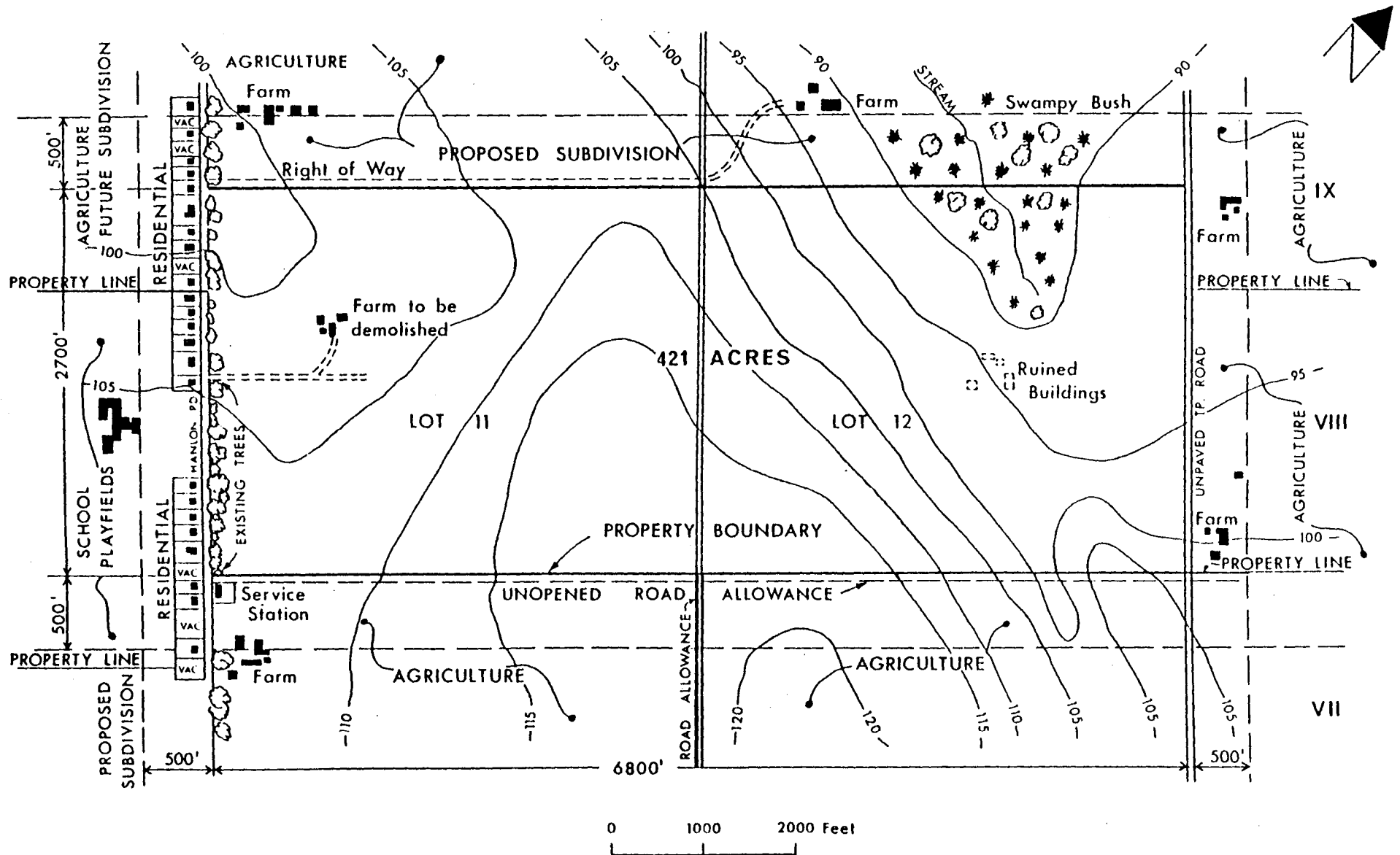
The following series of figures, taken from the publication, *A Guide to Site Development and Rehabilitation of Pits and Quarries*, Industrial Mineral Report 33, 1970, Ontario Department of Mines, may be valuable to operators developing Chapter 30 and NR 340 applications. Note that the illustrations do not contain all information required for an application.

Illustrations of temporary and final erosion control techniques can be found in the Wisconsin Department of Natural Resources handbook, *Wisconsin Construction Site Best Management Practice Handbook*.

Copies of the handbook may be purchased through:

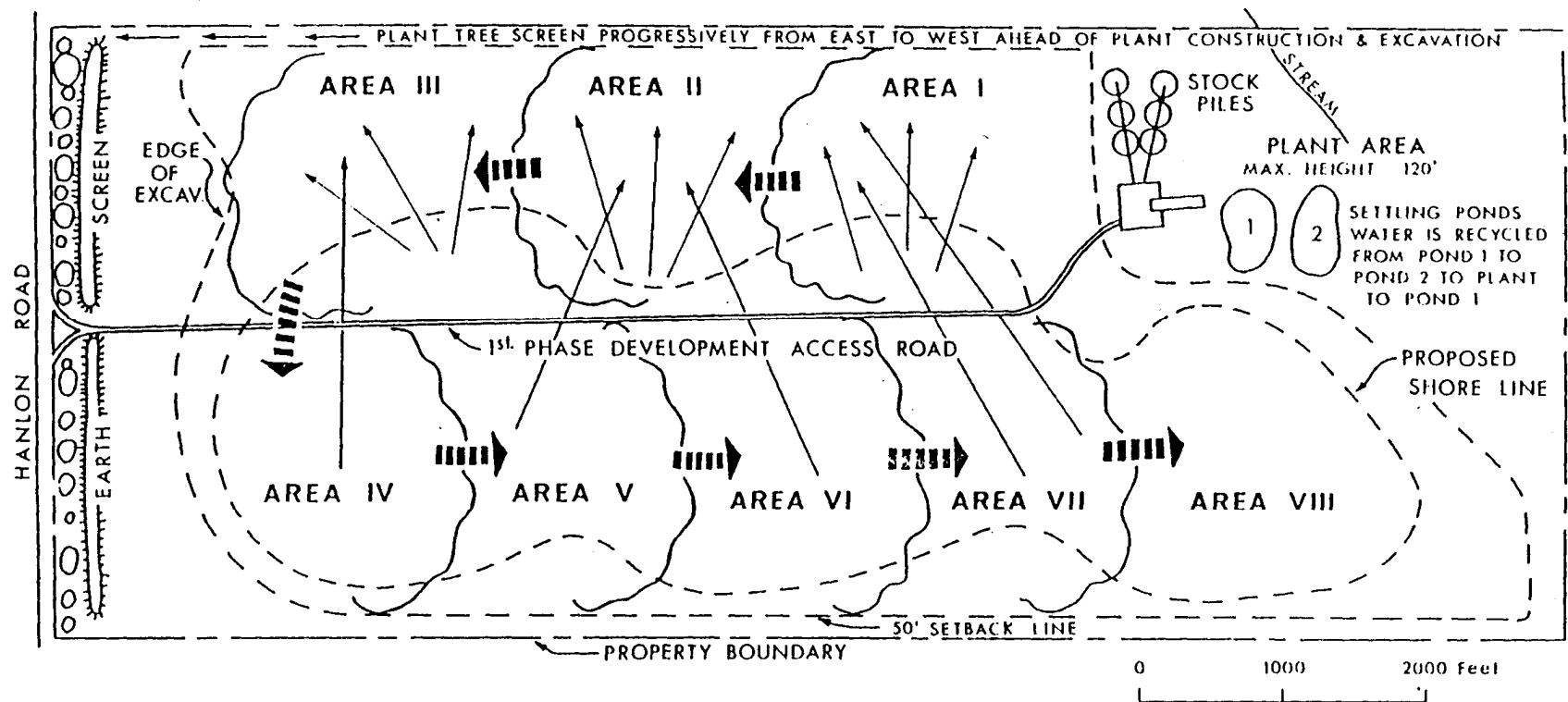
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


This is an existing site plan on 421 acres, bounded by roads, residential development, and a proposed subdivision. The surface contours of the proposed site are given.





#### AREA I

1. STRIP AND CONSTRUCT OVERBURDEN SCREENS ALONG HANLON RD.
2. INITIATE EXCAVATION IN THIS AREA
3. EXCAVATE IN DIRECTION INDICATED BY 
4. STOCKPILE OVERBURDEN IN AREAS INDICATED BY 

#### AREA II

1. EXTEND EXCAVATION

#### AREA III

1. CONSTRUCT ACCESS ROAD ALONG NORTH BANK OF PROPOSED LAKE
2. BEGIN SHAPING NORTH BANK: SPREAD OVERBURDEN ON BANK AND SEED (SEE CROSS-SECTION A1-A2 FIGURE 8)

#### AREA IV

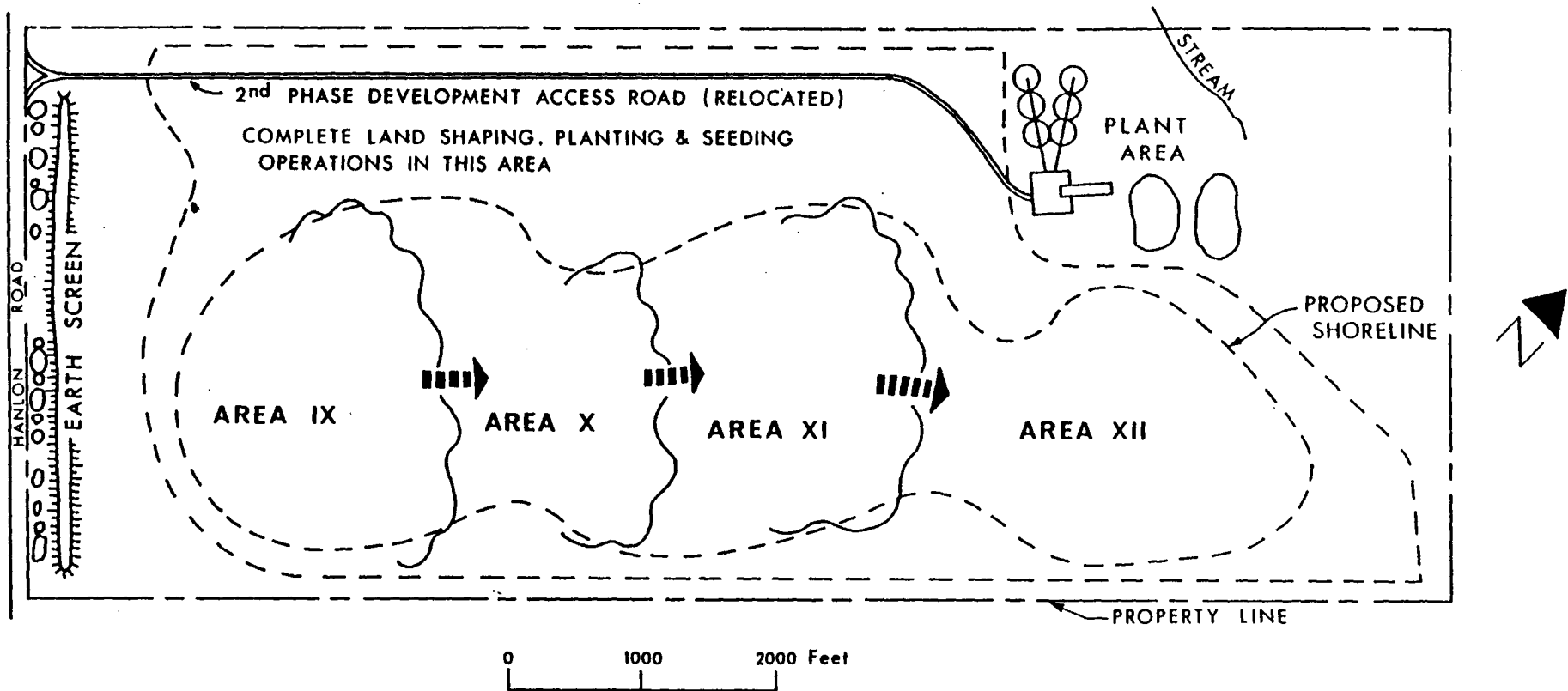
1. ABANDON EXISTING ACCESS ROAD
2. MOVE OVERBURDEN INTO AREA III
3. BEGIN SHAPING AND SEEDING OPERATIONS IN AREA III

#### AREAS V, VI, VII & VIII

1. MOVE OVERBURDEN FROM THESE AREAS TO AREAS I & II
2. BEGIN SHAPING & SEEDING OPERATIONS IN AREAS I & II
3. BEGIN SHAPING SOUTH BANK  
(SEE CROSS SECTION A1 - A2 FIGURE 8)
4. BEGIN TREE PLANTING PROGRAM ALONG SOUTHERN BANK, ALONG WESTERN BANK, AND ALONG DESIGNATED NORTHERN SHORELINE AND SITE BOUNDARY.

#### NOTES

1. AN "AREA" REPRESENTS APPROXIMATELY TWO YEARS EXCAVATION
2. LENGTH OF OPERATION: 10 TO 15 YEARS
3. PLANT SITED 15 FT. BELOW AVERAGE EXISTING SITE ELEVATION AT ELEVATION 90.0



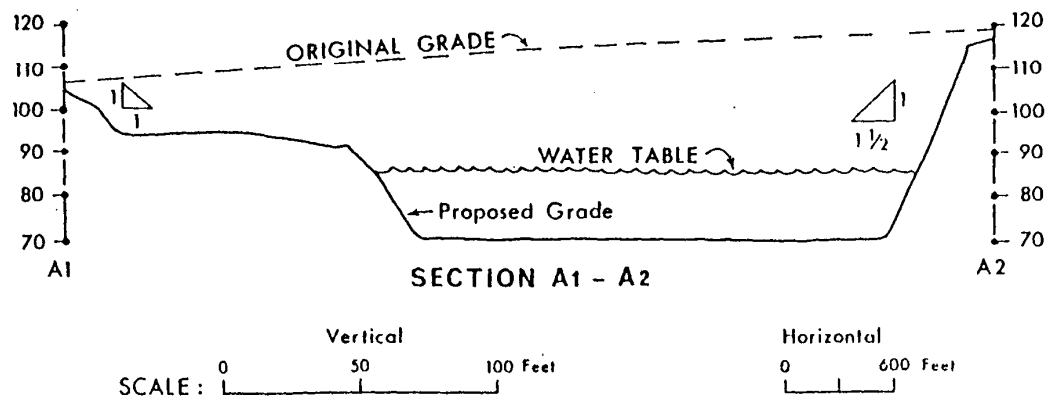
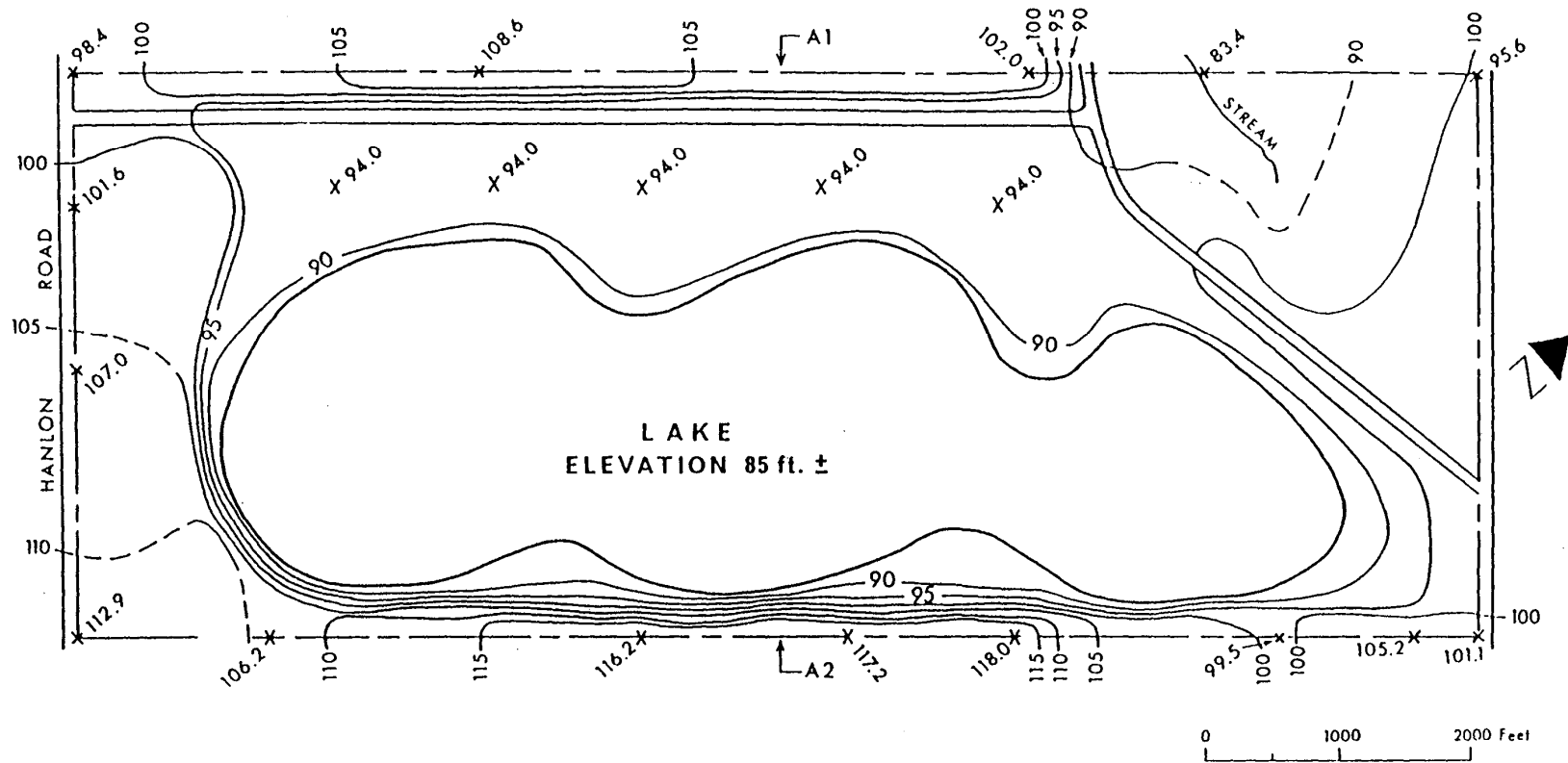
#### AREAS IX, X, XI & XII

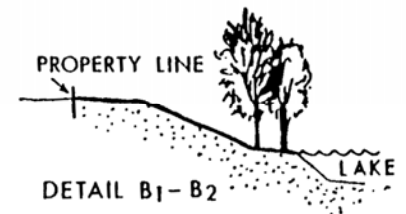
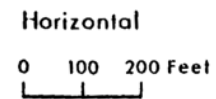
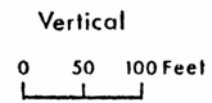
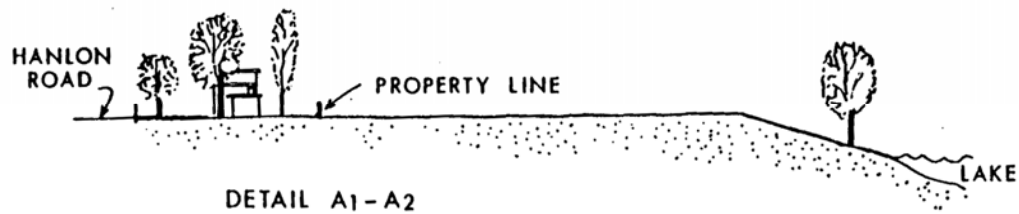
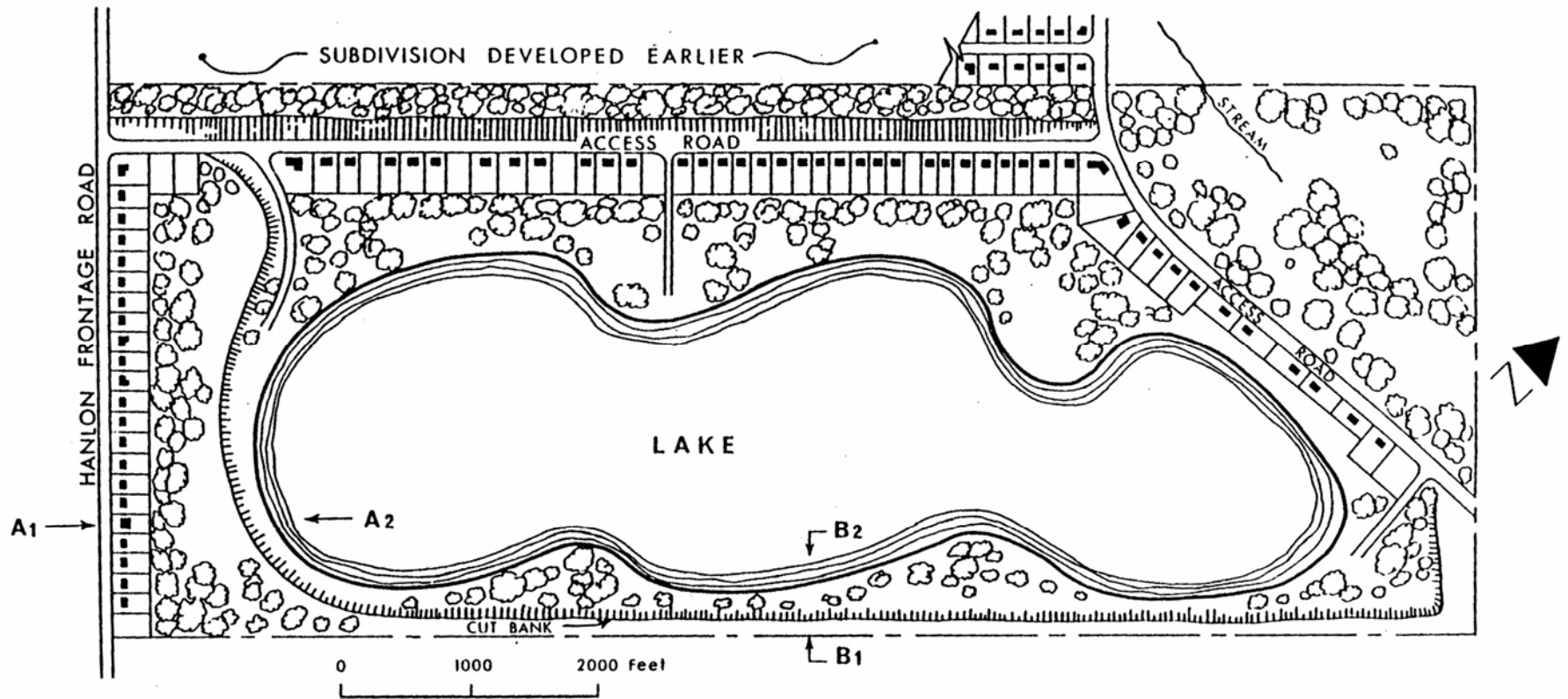
1. BEGIN EXCAVATION BELOW WATER IN AREA IX
2. SHAPE & LANDSCAPE SHORELINE CONCURRENTLY WITH EXCAVATION IN ALL FOUR AREAS
3. COMPLETE LANDSCAPE OPERATIONS ON REMAINING SITE
4. REMOVE PLANT
5. REMOVE OVERBURDEN SCREENS ALONG HANLON ROAD

#### NOTES

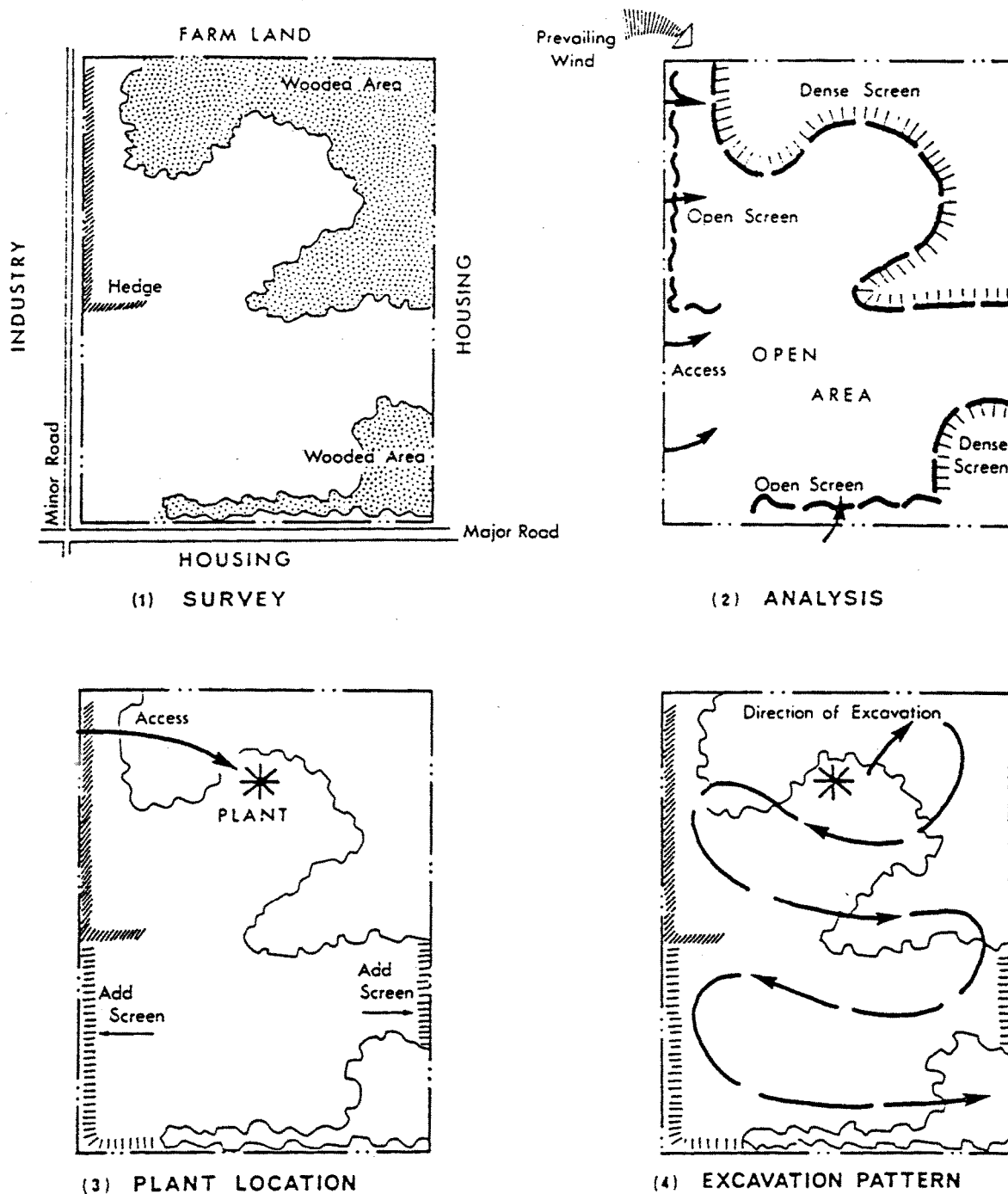
1. AN "AREA" REPRESENTS APPROXIMATELY ONE YEAR'S EXCAVATION
2. LENGTH OF OPERATION 5 TO 8 YEARS
3. PLANT SITED 15' BELOW AVERAGE EXISTING SITE ELEVATION AT ELEVATION 90.0

This shows the final excavation sequence below water and pond configuration.

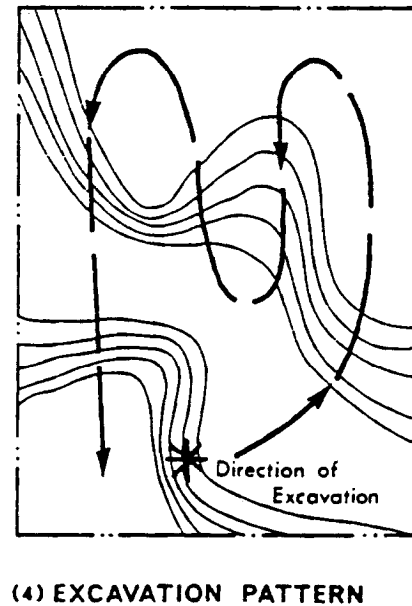
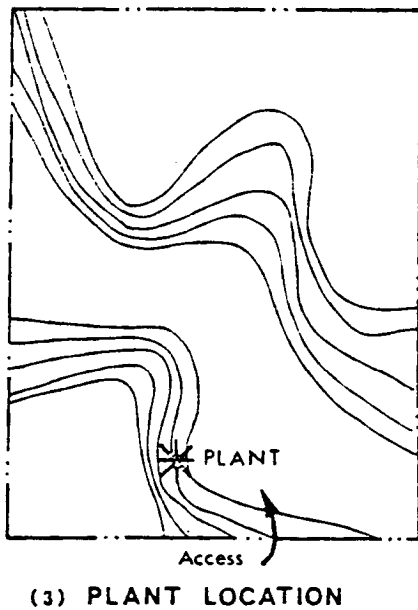
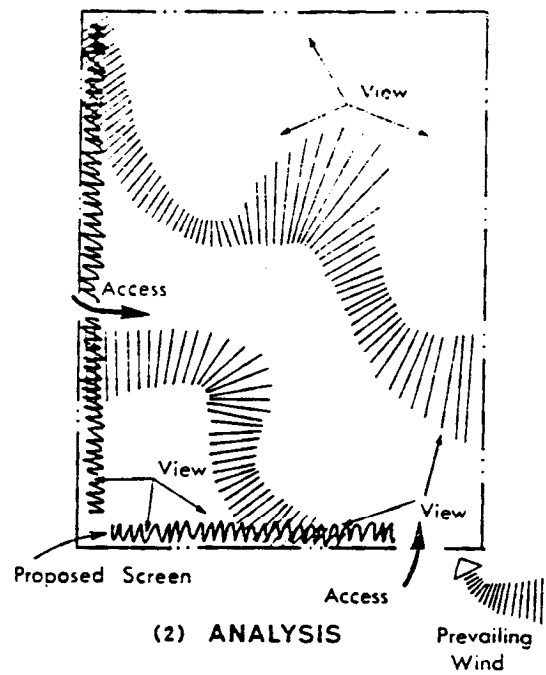
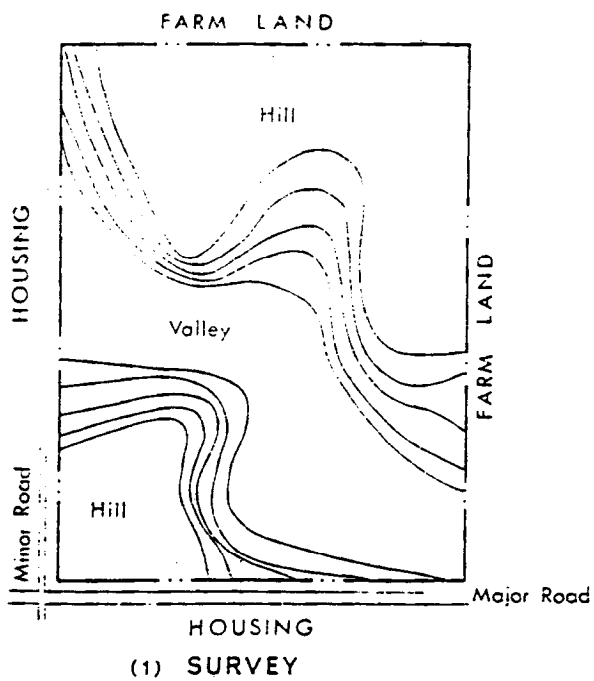




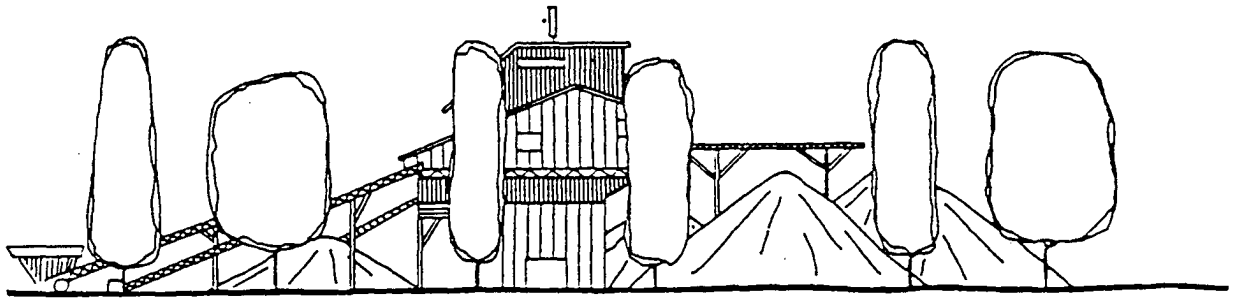
Proposed residential development scheme.



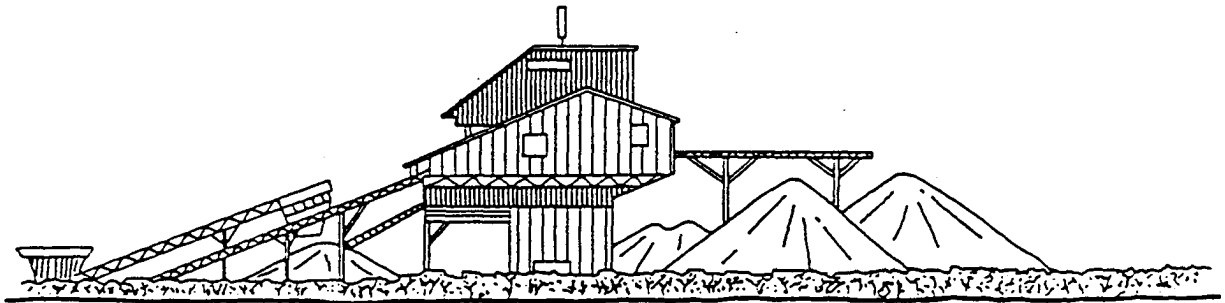
Illustrates the use of vegetative screening through a general survey, site analysis, plant locations, and excavation patterns.



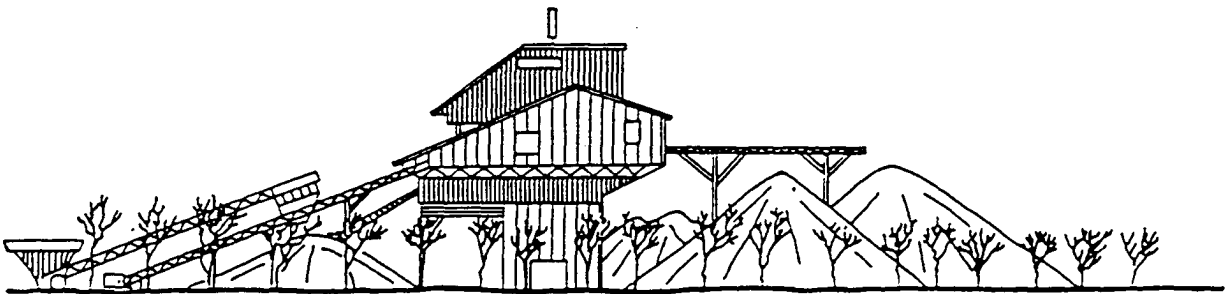
Illustrates the use of vegetative screening through a general survey, site analysis, plant locations, and excavation patterns.



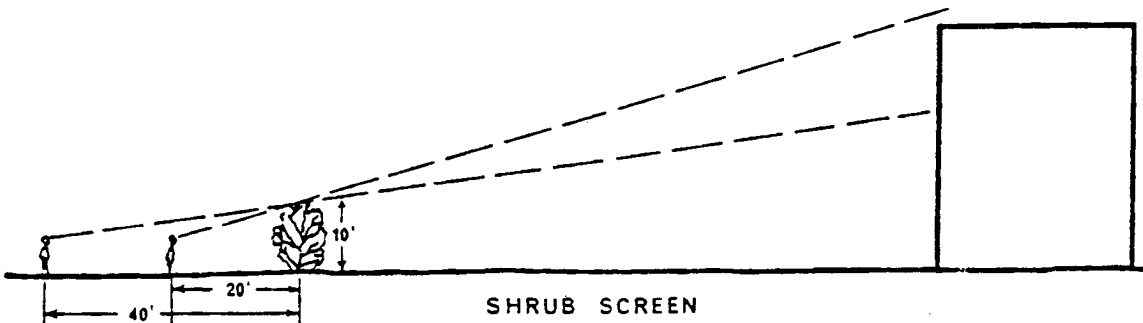
WIDELY SPACED TREES



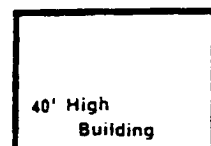
LOW SHRUBS



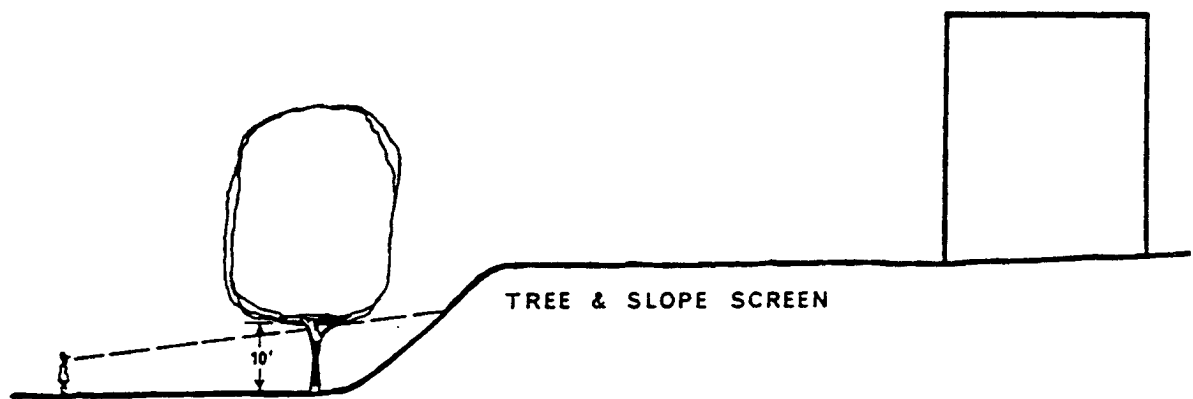
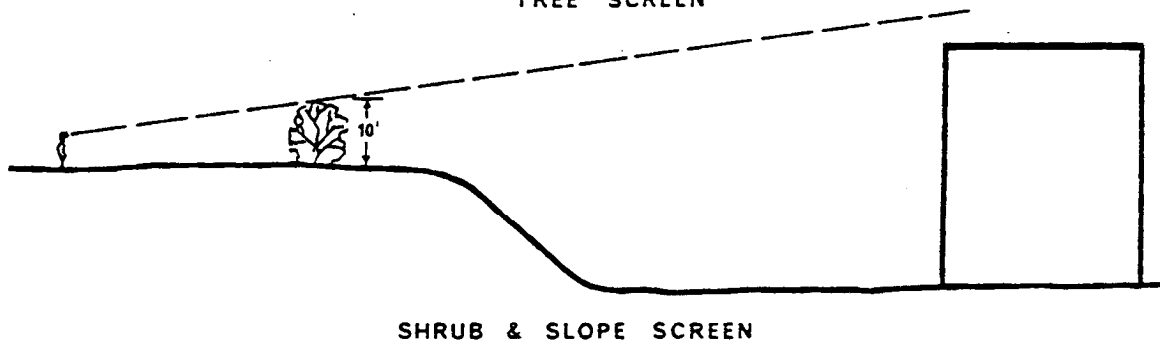
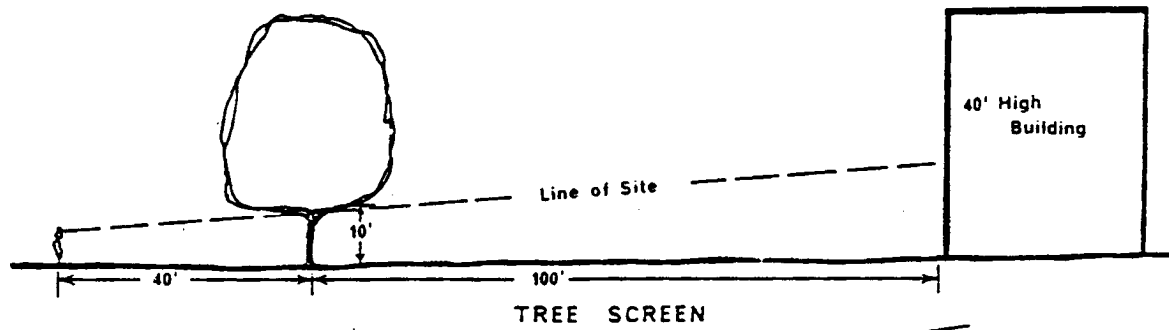
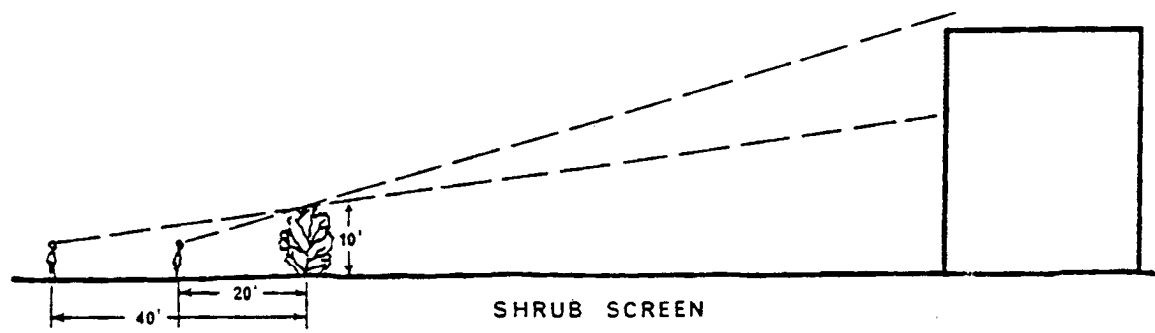
SMALL TREES



SHRUB SCREEN

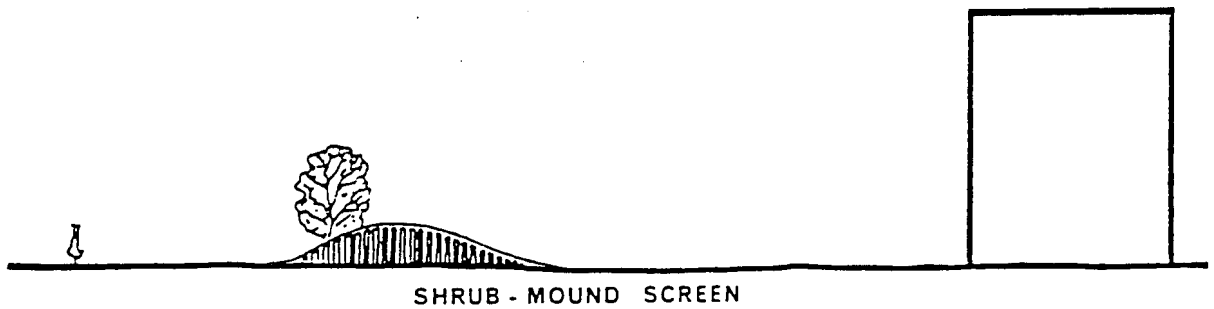
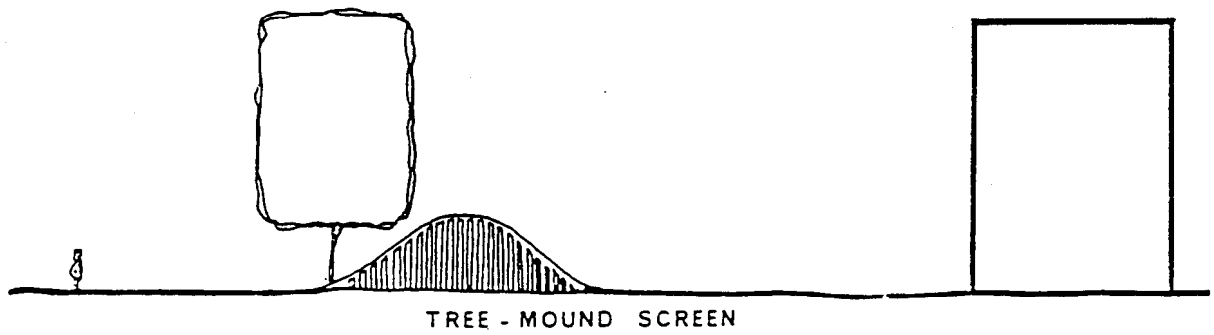
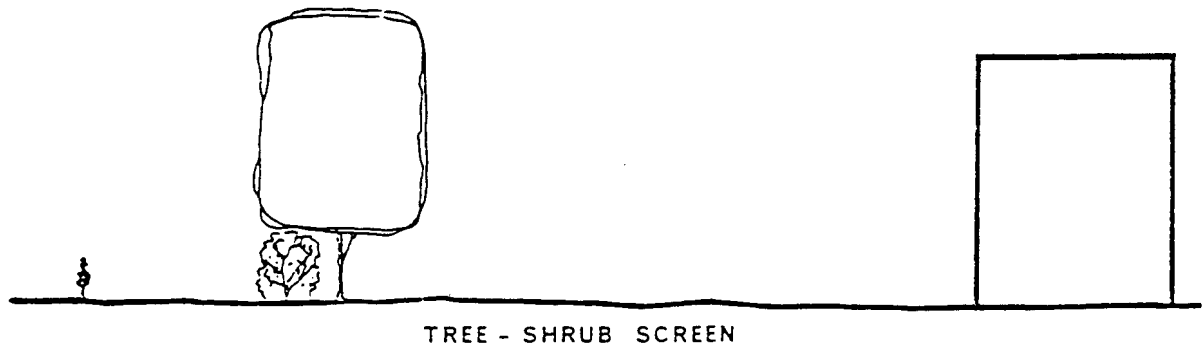


40' High Building

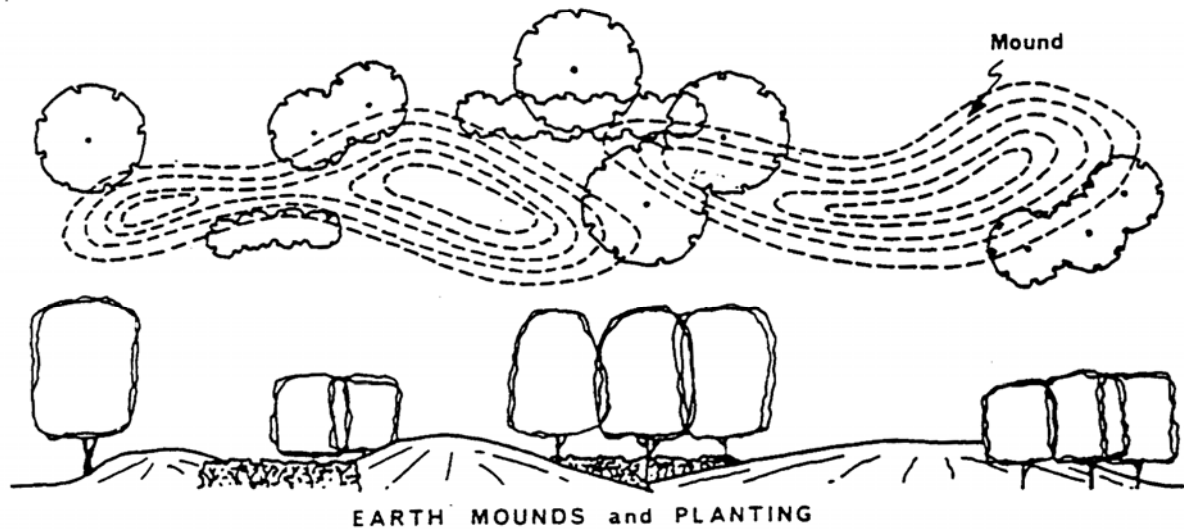
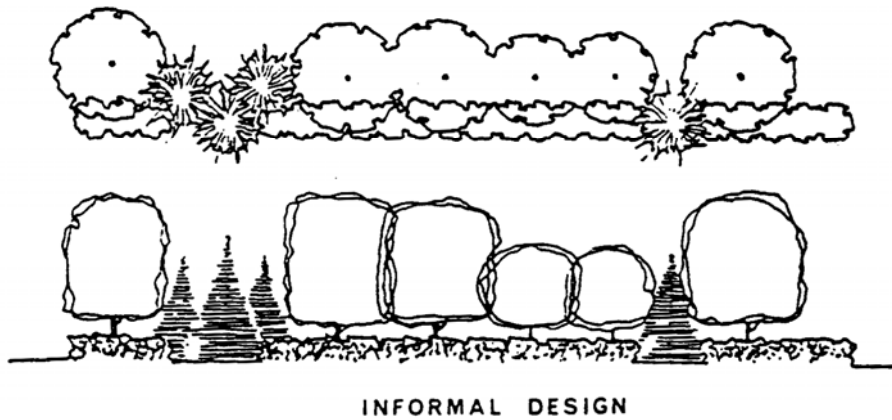
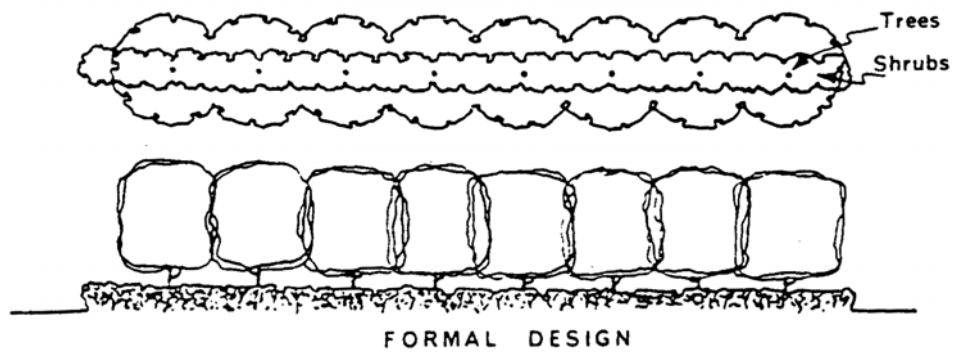


Screening techniques for utilizing existing trees, shrubs, and topography.

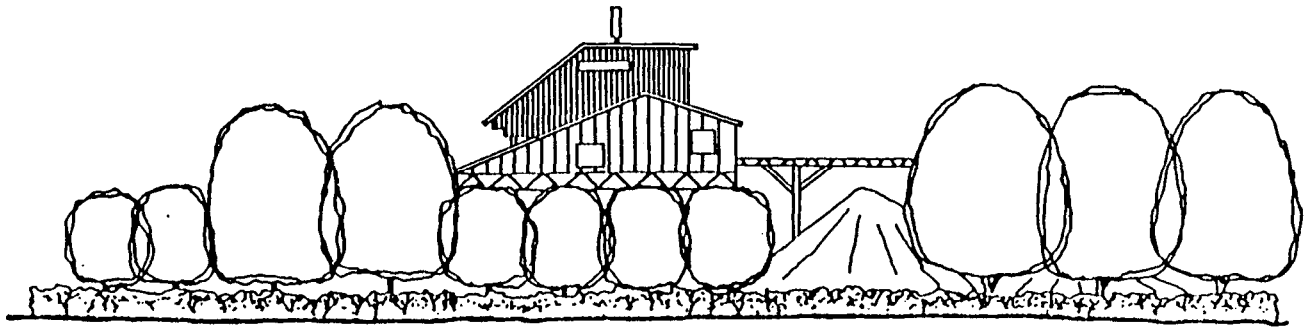




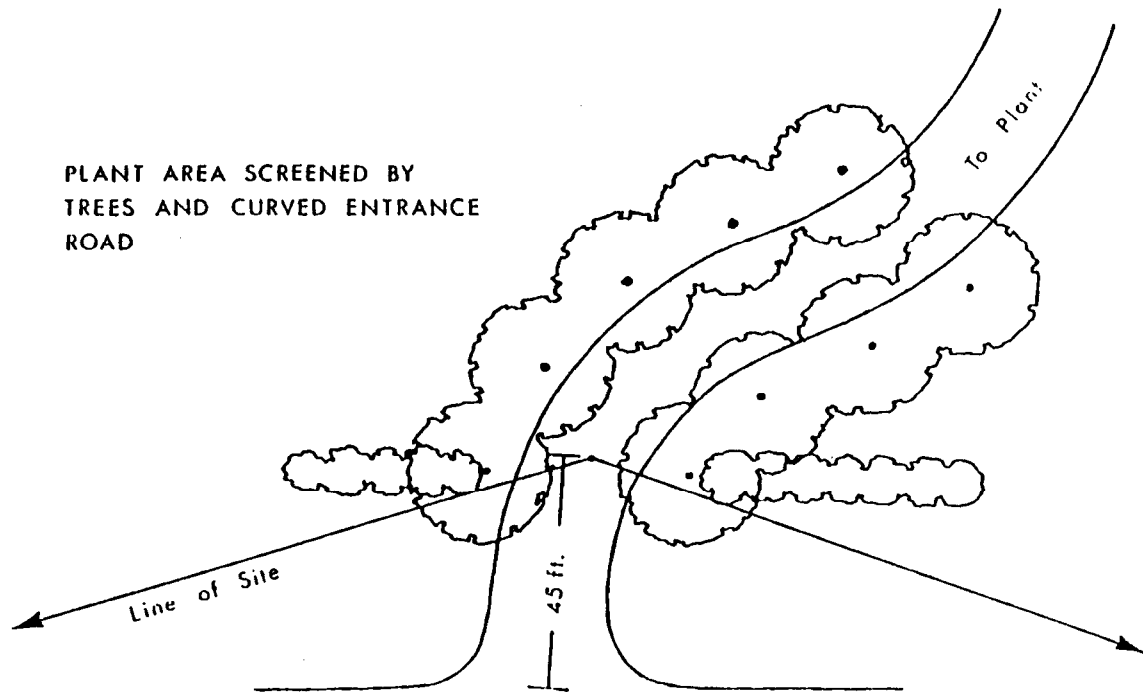
Screening techniques for utilizing existing trees, shrubs, and topography.



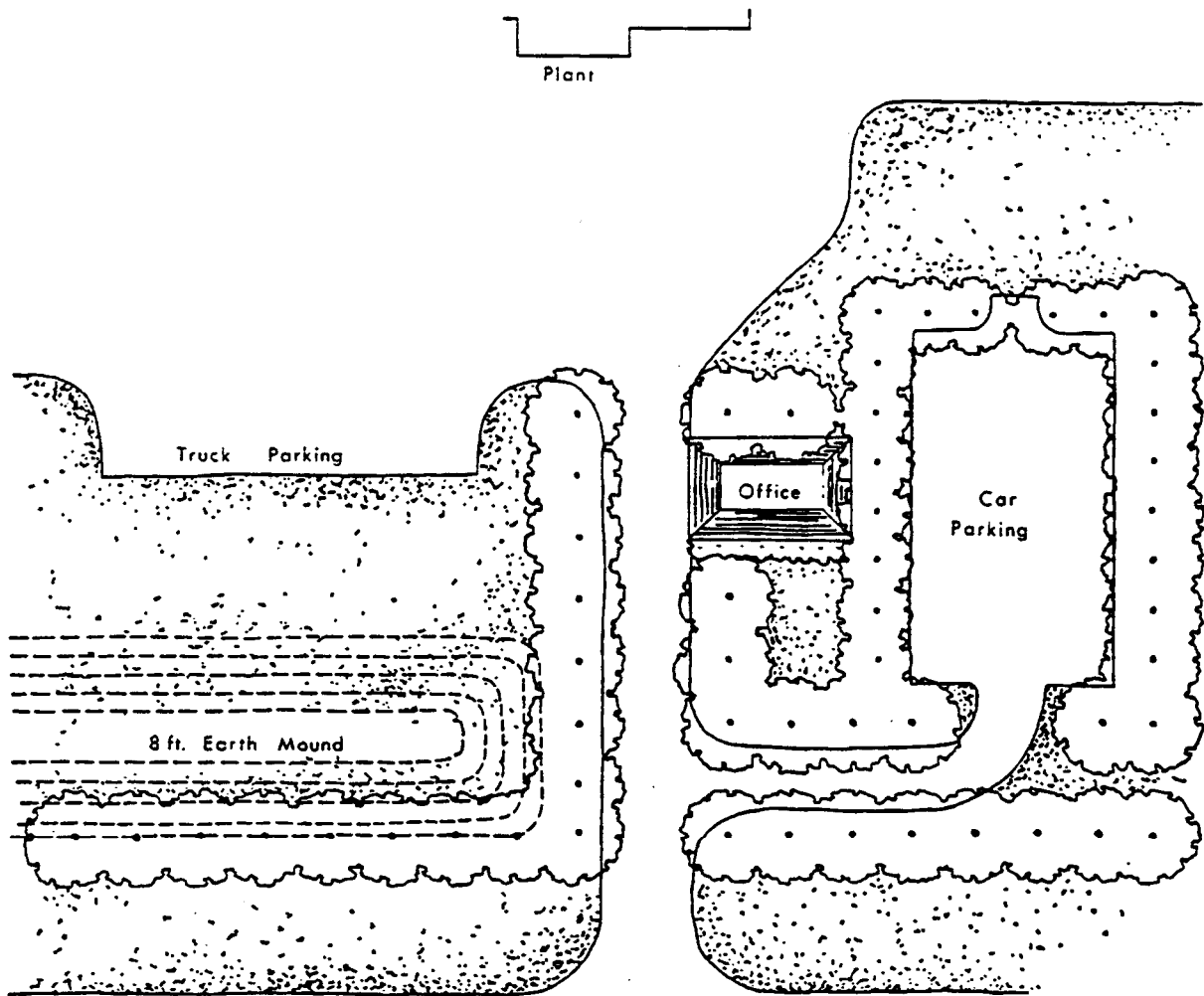
Screening techniques for utilizing existing trees, shrubs, and topography with the addition of vegetated earth mounds.



Processing plant vegetative planting and screening design.



Planting design with vegetative design and layout for screening.

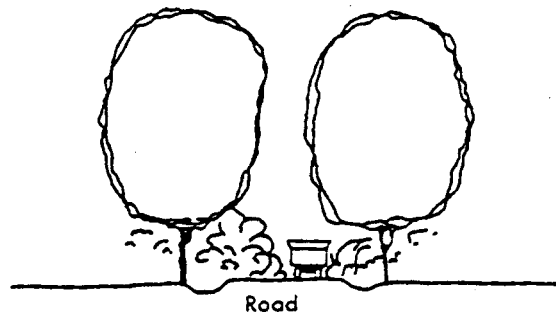
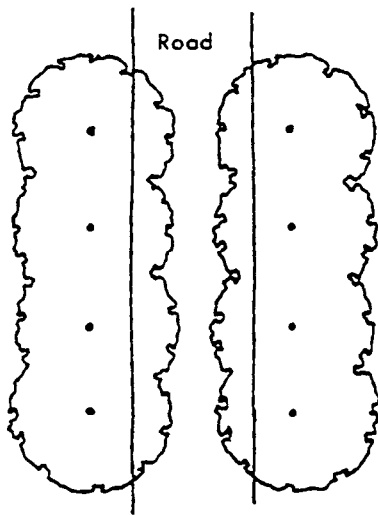


PLAN

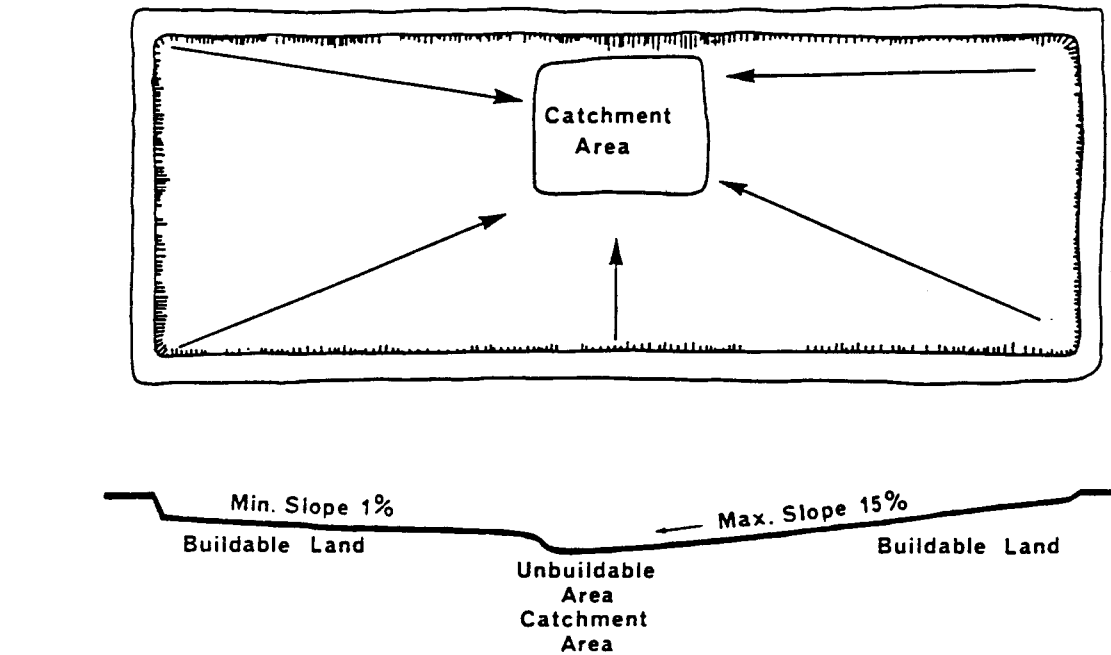


ELEVATION

Entrance area design and planting screen.



Entrance area design and planting screen.



Simple catch basin for sediment control.

## SECTION IV

### Glossary and Contacts List

#### Glossary

Abandonment of operations means the cessation of nonmetallic mining operations for more than 180 consecutive days where the cessation is not specifically set forth in an operator's application and permit, or by other written request. Abandonment of operations does not include the cessation of activities due to labor strikes or natural disasters.

Bank means the land surface abutting the bed of any navigable waterway which, either prior to any project or alteration of land contours or as a result of the proposed project or alteration, slopes or drains without complete interruption into the water body [as defined in NR 340.02 (2)].

Buffer zone means an undisturbed strip of land which may require additional planting of trees or shrubs to screen the operations from view or act as a sediment trap along waterways, property lines, and roads or highways.

Navigable streams have a bed and banks and can float a canoe or other small craft at some time of the year--even if only during spring floods. Refer to DNR Publication 5-3500(82) "Public or Private? I - Navigability".

Nonmetallic mining refuse or "refuse" means all waste soil, rock, mineral, liquid, vegetation and other material resulting from an operation. Refuse does not include merchantable by-products directly resulting from or displaced by the operation.

A nonmetallic mining site is the area disturbed by an operation, including the surface area from which material has been or will be removed, the surface area covered by or to be covered by refuse and mineral stockpiles, and land disturbed or to be disturbed by the construction or improvement of haulageways.

The Ordinary High-water Mark (OHWM) is the point on the bank or shore where the water is present often enough to leave a distinct wear mark. More specifically, the OHWM is the point on the bank or shore up to which the water, by its presence and action or flow, leaves a distinct mark indicated by erosion, destruction of or change in vegetation or other easily recognizable characteristics. Refer to DNR Publication 6-3500(82) "Public or Private? II - The Ordinary High-water Mark". If you have further questions, please contact the DNR Water Management Specialist serving your area.

Reasonable alternatives means the use of a substitute upland site having similar material or, where substitute sites are unavailable, modifying the operation plan or reclamation plan to minimize impacts to or stabilize the streambed and banks where the objectives of the operator can still be substantially met.

Reclamation means the rehabilitation of the nonmetallic mining site including, but not limited to, establishment of adequate vegetative cover, stabilization of soil conditions, prevention of environmental pollution and restoration of fish, plant and wildlife habitat.

Shorelands are areas zoned within 1000 feet of a lake's Ordinary High-water Mark, and within 300 feet of all navigable streams or the outer edge of the floodplain, whichever distance is greater.



## Zoning and DNR Offices By County

COUNTY	ZONING OFFICE	DNR OFFICE	COUNTY	ZONING OFFICE	DNR OFFICE
Adams	608-339-4222	715-421-7815	Marathon	715-847-5307	715-627-4317
Ashland	715-682-7014	715-372-4866	Marinette	715-735-7532	715-732-0101
Barron	715-537-6375	715-822-3590	Marquette	608-297-9125	414-485-3009
Bayfield	715-373-6138	715-372-4866	Menominee	715-799-3313	715-732-0101
Brown	414-436-3266	414-448-5142	Milwaukee	Call city halls	414-263-8679
Buffalo	608-685-3780	715-284-1424	Monroe	608-269-8738	608-785-9010
Burnett	715-349-2138	715-822-3590	Oconto	414-834-5322	715-732-0101
Calumet	414-849-2361	414-448-5142	Oneida	715-369-6130	715-358-9214
Chippewa	715-723-1831	715-839-3769	Outagamie	414-832-5255	414-424-4003
Clark	715-743-3241	715-284-1424	Ozaukee	414-284-9411	414-263-8682
Columbia	608-742-2191	414-485-3009	Pepin	715-672-8897	715-839-3769
Crawford	608-326-0294	608-785-9010	Pierce	715-273-3531	715-839-3769
Dane	608-266-9083	608-273-5970	Polk	715-485-3161	715-822-3590
Dodge	414-368-4411	414-485-3009	Portage	715-346-1334	715-421-7815
Door	414-743-5511	414-448-5142	Price	715-339-3272	715-762-3204
Douglas	715-394-0380	715-372-4866	Racine	414-886-8470	414-263-8682
Dunn	715-232-1401	715-839-3769	Richland	608-647-2447	608-935-3368
Eau Claire	715-839-4741	715-839-3769	Rock	608-755-2087	608-273-5970
Florence	715-528-4251	715-732-0101	Rusk	715-532-2156	715-762-3204
Fond du Lac	414-929-3139	414-485-3009	St. Croix	715-386-4680	715-839-3769
Forest	715-478-3893	715-358-9214	Sauk	608-356-5581	608-935-3368
Grant	608-723-2848	608-935-3368	Sawyer	715-634-8288	715-762-3204
Green	608-328-9423	608-273-5970	Shawano	715-526-6766	715-732-0101
Green Lake	414-294-4027	414-485-3009	Sheboygan	414-459-3060	414-263-8682
Iowa	608-935-5077	608-935-3368	Taylor	715-748-3131	715-762-3204
Iron	715-561-5414	715-372-4866	Trempealeau	715-538-2311	715-284-1424
Jackson	715-284-0220	715-284-1424	Vernon	608-637-7081	608-785-9010
Jefferson	414-674-2500	608-273-5970	Vilas	715-479-3620	715-358-9214
Juneau	608-847-9391	715-421-7815	Walworth	414-741-3394	414-263-8678
Kenosha	414-656-6550	414-263-8682	Washburn	715-468-2666	715-822-3590
Kewaunee	414-388-4410	414-448-5142	Washington	414-335-4445	414-263-8678
La Crosse	608-785-9722	608-785-9010	Waukesha	414-548-7790	414-263-8680
Lafayette	608-776-4820	608-935-3368	Waupaca	715-258-6255	414-424-4003
Langlade	715-627-6206	715-627-4317	Waushara	414-787-4631	414-424-4003
Lincoln	715-536-0333	715-627-4317	Winnebago	414-236-4844	414-424-4003
Manitowoc	414-683-4185	414-448-5142	Wood	715-421-8466	715-421-7815

■ In cities and villages, contact the municipal zoning administrator, building inspector, or clerk and the DNR office for the county in which the municipality is located